

EXHIBIT D49

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Mark Van Oene – April 9, 2020

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1 UNITED STATES DISTRICT COURT
2 NORTHERN DISTRICT OF CALIFORNIA
3 SAN FRANCISCO DIVISION
4
5 ILLUMINA, INC.,)
6 ILLUMINA CAMBRIDGE LTD.,)
7 Plaintiffs,) Case No.
8 vs.) 3:19-cv-03770-WHO
9 BGI GENOMICS CO., LTD., BGI) 3:20-cv-01465-WHO
10 AMERICAS CORP., MGI TECH CO.,)
11 LTD., MGI AMERICAS, INC. And)
12 COMPLETE GENOMICS, INC.,)
13 Defendants.)
14)

15
16 CONFIDENTIAL – OUTSIDE ATTORNEYS' EYES ONLY
17 UNDER THE PROTECTIVE ORDER
18
19 REMOTE VIDEOCONFERENCE, VIDEO-RECORDED DEPOSITION OF
20 MARK VAN OENE
21 Thursday, April 9, 2020
22 San Diego, California
23

24 Reported By:
25 Hanna Kim, CLR, CSR No. 13083

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

ILLUMINA, INC.,)
ILLUMINA CAMBRIDGE LTD.,)
Plaintiffs,) Case No.
vs.) 3:19-cv-03770-WHO
BGI GENOMICS CO., LTD., BGI) 3:20-cv-01465-WHO
AMERICAS CORP., MGI TECH CO.,)
LTD., MGI AMERICAS, INC. And)
COMPLETE GENOMICS, INC.,)
Defendants.)

CONFIDENTIAL – OUTSIDE ATTORNEYS' EYES
ONLY UNDER THE PROTECTIVE ORDER,
remote videoconference and video-recorded
deposition of MARK VAN OENE, taken under
the stipulations of Counsel thereof,
before Hanna Kim, CLR, Certified Shorthand
Reporter, No. 13083.

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18 (Appearing by Videoconference)

19

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1 San Diego, California

2 Thursday, April 9, 2020; 8:32 a.m.

08:32:38 3 --oOo--

08:32:38 4 THE VIDEOGRAPHER: Here begins Media Unit

08:32:48 5 Number 1 in the deposition of Mark Van Oene,

08:32:51 6 testifying in the matter of Illumina, Inc., Illumina

08:32:51 7 Cambridge, Limited, versus BGI Genomics, Limited,

08:33:05 8 et al.

08:33:05 9 Today's date is April 9th, 2020. The time

08:33:10 10 is 8:33 Pacific Standard Time. The deponent is

08:33:18 11 being remotely deposed and is located in San Diego,

08:33:23 12 California.

08:33:23 13 I'm David Manzo, the videographer, and I'm

08:33:26 14 remotely recording this deposition from San Jose,

08:33:26 15 California.

08:33:31 16 The court reporter is Hanna Kim and is

08:33:33 17 reporting this deposition from San Francisco,

08:33:36 18 California.

08:33:37 19 Would all counsel please identify

08:33:39 20 yourselves and state whom you represent one at a

08:33:42 21 time.

08:33:45 22 MR. McCLELLAN: Go ahead, Katie.

08:33:49 23 MS. SCOTT: Hello, this is Katie Scott

08:33:52 24 from Arnold & Porter representing the Defendants.

08:33:57 25 MR. McCLELLAN: This is Doug McClellan

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08:33:58 1 from Weil, Gotshal & Manges representing Plaintiff
08:34:04 2 Illumina entities. And also on the line is Roland
08:34:09 3 Schwillinski from Illumina.

08:34:11 4 MS. SCOTT: And I should have added that
08:34:13 5 my colleague, Neda Dadpey, also of Arnold & Porter,
08:34:17 6 is also on the line.

08:34:22 7 THE VIDEOGRAPHER: Okay. Will the court
08:34:25 8 reporter please remotely swear in the witness.

08:34:55 9 THE COURT REPORTER: Due to the need for
10 this deposition to take place remotely because of
11 the Government's order for social distancing, the
12 parties have stipulated that the court reporter may
13 swear in the witness over the phone and that the
14 witness has verified that he is in fact Mr. Mark Van
15 Oene.

16 Sir, I am going to administer the oath to
17 you, so please raise your right hand.

18 MARK VAN OENE,
19 having been administered an oath, was examined and
08:35:17 20 testified as follows:

08:35:17 21 THE VIDEOGRAPHER: Counsel, please
08:35:19 22 proceed.

08:35:20 23 MS. SCOTT: Thank you.

08:35:20 24 ///

08:35:20 25 ///

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08:40:33 1 that have to play into how you determine the pricing
08:40:37 2 of a product.

08:40:41 3 Q. Would you consider Illumina to be a
08:40:47 4 relatively data-intensive company?

08:40:53 5 MR. McCLELLAN: Object to form.

08:40:54 6 THE WITNESS: Sorry. Did somebody say
08:40:56 7 something?

08:40:57 8 MR. McCLELLAN: Sorry. I just said
08:40:59 9 "Object to form."

08:41:02 10 THE COURT REPORTER: And this is the court
08:41:03 11 reporter. I'm going to ask Mr. Van Oene to speak a
08:41:19 12 little louder --

08:41:19 13 THE WITNESS: Okay.

08:41:20 14 THE COURT REPORTER: -- and slower. Thank
08:41:21 15 you.

08:41:21 16 THE WITNESS: I believe we have a lot of
08:41:23 17 data. We're still getting better at how we use that
08:41:26 18 data to make different discoveries or -- or
08:41:30 19 understand things better. But I would say that we
08:41:33 20 do have access to a lot of data, yes.

08:41:35 21 BY MS. SCOTT:

08:41:37 22 Q. How does Illumina go about collecting all
08:41:40 23 of that data?

08:41:41 24 A. Most of it is transactional data, so order
08:41:48 25 history, customer data, call support data. You

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08:41:50 1 know, the analytics I look at are -- are, you know,
08:41:55 2 things that are reflective of our interactions with
08:42:00 3 the customers.
08:42:00 4 I don't want -- I don't want you to in any
08:42:02 5 way think that we access customer data. We do not.
08:42:05 6 We can -- we can do surveillance and health checks
08:42:07 7 on systems, but we are not accessing genomics or any
08:42:13 8 type of genomics data from those customers. This is
08:42:16 9 really transactional data and market data and -- and
08:42:19 10 informational data.

08:42:19 11 Q. When you say "transactional data," what is
08:42:23 12 included in that?

08:42:27 13 A. Most of it is around the orders and order
08:42:31 14 history. So with a customer institution, the key
08:42:35 15 contact that's making the order or the purchase
08:42:37 16 order number, the products, the quantities, the ship
08:42:40 17 schedules, you know, how those ship schedules change
08:42:43 18 over time.

08:42:43 19 You know, the -- the typical transactional
08:42:47 20 stuff that, you know, if you think of your Amazon
08:42:49 21 ordering, you know, look at your order history;
08:42:51 22 we -- we can look at order history and understand
08:42:53 23 what customers are buying at what price points and
08:42:56 24 what time of year.

08:42:57 25 Q. And is that information tracked for all

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08:43:01 1 Illumina customers?

08:43:02 2 A. Yes.

08:43:05 3 Q. And -- and what is the name of the system
08:43:07 4 that that information is tracked in?

08:43:09 5 A. We use SAP.

08:43:11 6 Q. And is there also data collected about
08:43:19 7 potential transactions, so before you get to the
08:43:22 8 point of actually making the sale?

08:43:24 9 A. Yes. We use SF -- Salesforce.com we use
08:43:29 10 to track pipeline and -- and customer -- it's a
08:43:31 11 customer relation management system. So we use that
08:43:34 12 to track, you know, customer opportunities, when we
08:43:39 13 think those will close, what products we're
08:43:43 14 discussing with them.

08:43:44 15 We also within that will track sort of
08:43:48 16 health of their systems, uptime of systems, and
08:43:51 17 understand the different technical support issues
08:43:55 18 that they have.

08:43:55 19 So we use it both for sales future
08:43:58 20 pipeline as well as for tech support and field
08:44:02 21 support service calls to make sure that everybody
08:44:05 22 has the information they need for each of those
08:44:06 23 customers.

08:44:07 24 Q. And are people in the field, you know,
08:44:13 25 whether they're sales representatives or -- or other

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08:51:37 1 differentiated?

08:51:37 2 A. It would depend on the magnitude of that
08:51:42 3 error rate. I would -- I would suggest that
08:51:45 4 Illumina has been so successful because we have the
08:51:49 5 highest accuracy technologies on the market and the
08:51:52 6 lowest error rates on the market.

08:51:54 7 And so, if it's within -- within small
08:51:58 8 percentages of that, I don't think that's a
08:52:00 9 differentiator. If it's an error rate that's much
08:52:09 10 higher, like Oxford Nanopore --

08:52:09 11 THE COURT REPORTER: Such as what? If
08:52:09 12 it's an error rate such as --

08:52:09 13 THE WITNESS: Oxford Nanopore.

08:52:16 14 BY MS. SCOTT:

08:52:16 15 Q. In your understanding, is Oxford Nanopore
08:52:22 16 generally known for having higher error rates than
08:52:28 17 Illumina systems?

08:52:29 18 A. Yes.

08:52:30 19 Q. And is Oxford Nanopore generally known for
08:52:35 20 having high error rates than MGI Systems?

08:52:40 21 A. Yes, it's known for having high error
08:52:45 22 rates. It's differentiated because it has extremely
08:52:47 23 long sequence reads. And so their differentiation
08:52:51 24 is not on price or on error, it's on the length of
08:52:53 25 the read.

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08:52:53 1 And so there are different applications
08:52:55 2 you can do, like bacterial sequencing or non-human
08:53:00 3 sequence, that are easier to do with a little bit of
08:53:04 4 Oxford Nanopore than with either Illumina or MGI.

08:53:08 5 Q. Would it be feasible to use an Oxford
08:53:14 6 Nanopore system for a whole genome sequencing?

08:53:19 7 A. Feasible, but not affordable.

08:53:25 8 Q. Are you familiar with the Ion Torrent
08:53:31 9 System?

08:53:32 10 A. I am.

08:53:32 11 Q. Is it -- would you consider it feasible
08:53:37 12 for whole genome sequencing?

08:53:39 13 A. Again, it -- it could be done, but it
08:53:40 14 doesn't have the output or at the price points
08:53:45 15 necessary to -- to have that as a primary
08:53:48 16 application. It's predominantly used in clinical
08:53:51 17 settings for small panel approaches to sequencing.

08:53:54 18 Q. And what about the Pacific Biosciences
08:54:02 19 system, would that be feasible for whole genome
08:54:05 20 sequencing?

08:54:05 21 A. Again, feasible, but not affordable.
08:54:09 22 It's -- you know, it's more than ten times the cost
08:54:11 23 to do a genome on a PacBio system --

24 THE COURT REPORTER: I'm sorry. Sir, I
25 didn't hear the word. It's more than ten times the

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1 cost to do a genome?

2 THE WITNESS: On a PacBio sequencer.

3 THE COURT REPORTER: I'm going to ask both
4 of you to speak a little slower because it sounds a
5 bit muffled. Thank you.

6 THE WITNESS: Okay.

08:54:38 7 MS. SCOTT: And just for the court
08:54:40 8 reporter's benefit, one of the companies we'll be
08:54:44 9 referring to is -- the shorthand is PacBio, which is
08:54:48 10 P-A-C-B-I-O, so I think in the last answer it would
08:54:54 11 have been PacBio sequencer. Great.

08:54:54 12 BY MS. SCOTT:

08:55:15 13 Q. Which Illumina sequencing systems are --
08:55:17 14 would you consider appropriate for whole genome
08:55:20 15 sequencing?

08:55:21 16 A. The -- the majority of the whole genomes
08:55:26 17 sequenced would be sequenced on either a HiSeq X10
08:55:31 18 platform or on our NovaSeq platform.

08:55:34 19 You can do it on NextSeq platforms, which
08:55:37 20 are our mid-throughput; but again, it's not as
08:55:40 21 affordable.

08:55:41 22 So if -- if there's any volume of
08:55:43 23 sequencing for whole genomes being done, it's
08:55:45 24 typically done on either our HiSeq X10 or on our
08:55:48 25 NovaSeq.

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08:55:51 1 Q. And globally are there competitors of
08:55:55 2 Illumina that offer systems that are feasible for
08:56:01 3 use in sequencing whole genomes?

08:56:03 4 A. The -- the BGI/MGI is really the only
08:56:11 5 other affordable and -- and output -- higher output
08:56:19 6 system that would be used for whole genome
08:56:21 7 sequencing today.

08:56:22 8 Q. And currently in the United States, is the
08:56:35 9 Illumina high-throughput or mid-throughput system,
08:56:40 10 are they the only ones that are available for sale?

08:56:46 11 MR. McCLELLAN: Objection. Vague.

08:56:51 12 THE WITNESS: Yeah, I'm -- I'm not sure I
08:56:52 13 understand your question.

08:56:54 14 BY MS. SCOTT:

08:56:54 15 Q. Let me -- let me rephrase.

08:56:56 16 In 2019, was Illumina the only company on
08:57:06 17 the market in the United States offering sequencing
08:57:11 18 systems that were feasible for use in whole genome
08:57:18 19 sequencing?

08:57:19 20 A. So some people would try to do that with
08:57:26 21 Ion Torrent or with Pacific Biosciences if they had
08:57:31 22 that technology, even though it was expensive.

08:57:35 23 Many US customers would outsource, so they
08:57:38 24 would send samples to BGI/MGI -- I -- I don't know
08:57:43 25 how to refer to it today, but to -- to the BGI

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08:57:45 1 group, we'll say, to have the whole genome
08:57:48 2 sequencing done -- done as a service. And then
08:57:51 3 Illumina was selling the high-end technologies in
08:57:54 4 the US.

08:57:55 5 So -- so they did have access to other
08:57:59 6 technologies or services for whole genome
08:58:01 7 sequencing.

08:58:02 8 Q. So -- just to make sure I understand,
08:58:09 9 so if -- so if a customer wanted to do whole genome
08:58:13 10 sequencing and they were in the United States, their
08:58:18 11 options would be to -- to send their samples out to
08:58:22 12 a service provider, to -- or to buy a [verbatim]
08:58:26 13 Illumina system, or to use one of the technologies
08:58:32 14 that we've talked about as being potentially
08:58:37 15 feasible, but not affordable; is that right?

08:58:40 16 A. Correct.

08:58:40 17 Q. So we got off to kind of a quick start. I
08:58:56 18 just -- I'll take a quick step back and -- to say
08:59:00 19 that I know many of us are calling in to -- or are
08:59:06 20 on videoconference from homes and other places. I
08:59:09 21 know, at least speaking for myself, I have children
08:59:14 22 around here somewhere and dogs and cats and all
08:59:16 23 sorts of those things.

08:59:17 24 So to the extent there's any -- any noise
08:59:20 25 or interruptions, I -- I hope we can be all

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09:15:40 1 typically sell, you know, [REDACTED] to [REDACTED] of those a year
09:15:44 2 in the US. We have a mid-throughput portfolio of
09:15:50 3 NextSeq and NextSeq Dx's and different flavors of
09:15:55 4 NextSeqs that we'll sell a [REDACTED] of a year.
09:15:58 5 And we have NovaSeqs and HiSeqs that we typically
09:16:02 6 sell, you know, [REDACTED] to [REDACTED] of a year in the United
09:16:06 7 States.

09:16:24 8 BY MS. SCOTT:

09:16:24 9 Q. What is your understanding of how many
09:16:16 10 NovaSeq systems Illumina expects to sell in 2020?

09:16:25 11 A. We expect to still sell more than [REDACTED]
09:16:30 12 NovaSeq units globally in 2020.

09:16:34 13 Q. And how many of those [REDACTED] NovaSeq units
09:16:42 14 would you expect to sell in the United States?

09:16:44 15 A. We typically do between 50 and 60 percent
09:16:48 16 of our business in the United States. It's our
09:16:51 17 largest market and by far, our largest individual
09:16:56 18 country.

09:16:57 19 Q. And how many NextSeq systems do you expect
09:17:09 20 to sell globally in 2020?

09:17:13 21 A. I would have to pull up the -- the actual
09:17:15 22 number, but I'm going to ballpark it at [REDACTED] units,
09:17:25 23 plus or minus [REDACTED]

09:17:25 24 THE COURT REPORTER: I'm sorry. How many
09:17:25 25 units? Plus or minus how many units?

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09:17:29 1 THE WITNESS: [REDACTED]

09:17:30 2 BY MS. SCOTT:

09:17:30 3 Q. And would that also be approximately 50 to

09:17:35 4 60 percent in the United States?

09:17:36 5 A. Yes, it would.

09:17:39 6 Q. Do you have a sense of what percent of

09:17:54 7 Illumina's sequencing revenue is a result of sales

09:17:59 8 in the United States?

09:18:00 9 A. Overall se- -- like -- like overall

09:18:11 10 sequencing revenue?

09:18:12 11 Q. Yes.

09:18:13 12 A. It's, again, you know, probably closer to

09:18:18 13 60 percent than 50. But, you know, our business

09:18:22 14 is -- is -- is big enough now that it's quite

09:18:24 15 consistent, in terms of regional contributions.

09:18:45 16 Q. Do -- how do prices vary for the same

09:18:48 17 system between different geographies?

09:18:53 18 A. The prices on our -- on our instruments

09:18:58 19 are very consistent globally. Where -- where we see

09:19:04 20 different prices is mostly on the consumables, so

09:19:06 21 the -- the SBS consumables that run through those

09:19:10 22 systems. And that's -- that's where, based on

09:19:14 23 market segment or geographic segment, you will see

09:19:18 24 price differences occur.

09:19:27 25 Q. When you refer to "market segment," what

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09:19:29 1 does that mean?

09:19:31 2 A. So within a clinical market, I would
09:19:36 3 segment that to oncology, to reproductive health, or
09:19:42 4 genetic disease. But those are three different
09:19:47 5 segments we'll be selling to at different price
09:19:47 6 points with our consumables and clinical. And then
09:19:48 7 our research market or an agriculture market are
09:19:51 8 completely different from those clinical, again.

09:19:57 9 Q. Is there ever a situation where the
09:20:02 10 same -- essentially the -- the same consumable is
09:20:05 11 sold for a different price -- strike that.

09:20:11 12 Are -- are -- does Illumina offer
09:20:27 13 different levels of discounts between different
09:20:31 14 geographies?

09:20:32 15 A. Our dis- -- our discounts are quite
09:20:40 16 consistent, but our list prices may differ. And so
09:20:44 17 we have different regional price books that apply to
09:20:49 18 capture that geographical need. And then from that
09:20:53 19 different price book, we then apply a discounting
09:20:56 20 authority and -- and a -- and a volume discounting
09:21:00 21 matrix.

09:21:01 22 Q. So is it correct to say that the list
09:21:05 23 price for a NovaSeq in the United States would be
09:21:12 24 higher than a NovaSeq list price for China?

09:21:19 25 A. Actually, China, we have very consistent

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09:26:59 1 because not everybody could not use our full six
09:26:59 2 terabases of sequence, and so they wanted that
09:27:04 3 flexibility in the NovaSeq. We've also been
09:27:09 4 exploring read lengths and doing multi-read
09:27:09 5 length --
09:27:09 6 THE COURT REPORTER: I'm sorry, we've been
09:27:09 7 exploring -- we've been exploring read length?
09:27:09 8 THE WITNESS: Read length. Yeah.
09:27:42 9 BY MS. SCOTT:
09:27:43 10 Q. Is it correct that the NovaSeq uses
09:27:47 11 patterned flow cells?
09:27:49 12 A. Correct.
09:27:49 13 Q. And is one of the advances in the NovaSeq
09:28:01 14 flow cells that the -- that their patterning becomes
09:28:07 15 more dense over time?
09:28:08 16 A. Yes. Density of -- of pattern flow cells
09:28:13 17 is a mechanism to use to increase our output. And,
09:28:18 18 in fact, on our recent NextSeq 2000 launch in
09:28:26 19 January of 2020, so just this last January, you
09:28:28 20 know, it was a density improvement on those flow
09:28:31 21 cells that enabled us to -- to drive that technology
09:28:40 22 forward for the next sequence.
09:28:41 23 Q. What -- I -- I'm sorry, I'm not sure I
09:28:46 24 completely understand what you said.
09:28:47 25 So what was it about the density of the

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09:28:49 1 flow cells that resulted in driving forward the

09:28:55 2 NextSeq -- the new NextSeq launch?

09:28:57 3 A. Yeah. Tighter pitch of those patterns --

09:29:00 4 of the patterns on the flow cells. So more -- more

09:29:02 5 clusters per flow cell, or more clusters per -- per

09:29:07 6 square millimeter on those flow cells. It helps us

09:29:11 7 to miniaturize, which helps us to go faster. It

09:29:15 8 helps us to reduce cost.

09:29:19 9 Q. When did Illumina first start offering

09:29:21 10 pattern flow cells?

09:29:25 11 A. It would have been one of our HiSeq family

09:29:35 12 systems, either the HiSeq 4000 or the HiSeq X Ten,

09:29:43 13 which would have been launched in 2014, I think,

09:29:45 14 2000-- between 2012 to 2014. You'll have to check

09:29:50 15 some of the documents. Sorry.

09:29:55 16 Q. Okay.

09:29:55 17 A. I've been at Illumina a long time.

09:30:04 18 Q. Is another advance in the sequencing

09:30:12 19 process that Illumina has used with some of its

09:30:16 20 newer systems to use two-color chemistry?

09:30:22 21 MR. McCLELLAN: Objection. This is out --

09:30:25 22 sorry. Objection. Outside the scope of the

09:30:29 23 declaration.

09:30:29 24 THE WITNESS: Yeah. What I will say is

09:30:31 25 there's a lot of confusion. It's two channels of

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09:30:35 1 chemistry. And so we use two channels for imaging.
09:30:38 2 It's not two dye. And -- and so, you know, I think
09:30:41 3 it's important to differentiate number of channels
09:30:44 4 from the number of dyes, And we use multiple dyes in
09:30:56 5 all of our SBS chemistries.

09:30:58 6 BY MS. SCOTT:

09:30:58 7 Q. And when you say that you "use multiple
09:31:01 8 dyes," are you referring to -- are some of those
09:31:06 9 dyes of the same color?

09:31:07 10 A. Yes. Where we use multiple green or
09:31:12 11 multiple red dyes in a green/red two-channel SBS
09:31:20 12 chemistry.

09:31:20 13 Q. And is there also a blue/green chemistry?

09:31:24 14 A. There is. We just released that in
09:31:26 15 January, with the recently launched NextSeq 2000.

09:31:36 16 Q. So the newest currently release of --

09:31:42 17 THE COURT REPORTER: I'm sorry. Counsel,
09:31:44 18 I can't hear you.

09:31:46 19 MS. SCOTT: Sorry. I'll -- I'll start
09:31:47 20 over.

09:31:48 21 BY MS. SCOTT:

09:31:48 22 Q. So it's correct to say that the most
09:31:50 23 recently released mid-throughput sequencer of
09:31:54 24 Illumina uses two-channel chemistry?

09:31:56 25 A. Two-channel blue/green chemistry.

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09:32:01 1 Q. And it also uses pattern flow cells;
09:32:07 2 correct?

09:32:07 3 A. It does.

09:32:07 4 Q. Do you have an understanding of
09:32:20 5 defendants -- the difference between defendants'
09:32:22 6 StandardMPS reagents and CoolMPS reagents?

09:32:28 7 A. I've -- I've looked schematically at it.
09:32:32 8 I haven't seen data on the differences, but I have
09:32:35 9 looked schematically at the differences of how you
09:32:40 10 introduce the label.

09:32:41 11 Q. Which -- I -- well, before I ask the
09:32:45 12 question --

09:32:45 13 MS. SCOTT: Just for the benefit of the
09:32:47 14 court reporter, we're going to be talking a lot
09:32:50 15 about two different types of chemistries. One is
09:32:54 16 called StandardMPS, which is the word "standard,"
09:32:58 17 and then no space, and then the letters --
09:33:01 18 capitalized letter MPS?

09:33:07 19 And then the second one is CoolMPS, also
09:33:17 20 with no space.

09:33:17 21 BY MS. SCOTT:

09:33:28 22 Q. So what, in your understanding, is the
09:33:31 23 difference between defendant's StandardMPS and
09:33:42 24 CoolMPS reagents?

09:33:43 25 A. So "Standard" being -- you know, they're

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10:11:02 1 specific segments.

10:11:04 2 Q. And within the clinical segment, are
10:11:12 3 any of — or within the clinical segment, what
10:11:14 4 percentage of customers would use high-throughput
10:11:20 5 sequencers?

10:11:25 6 A. It depends on the maturity of that
10:11:28 7 segment. And — and what we see in the clinic is
10:11:32 8 that testing is very specialized and much more
10:11:36 9 centralized early on. And over time as more
10:11:44 10 hospitals and more physicians start to order those
10:11:47 11 tests, the need for decentralized testing
10:11:50 12 environment prevails.

10:11:51 13 And so most of our segments are still very
10:11:54 14 centralized in the clinic; and so it's, you know,
10:11:57 15 handfuls of customers that are offering these tests,
10:12:00 16 not — not every hospital pathology lab that's
10:12:04 17 offering it.

10:12:05 18 And that's why we have such an opportunity
10:12:07 19 for growth, because right now, it is very early and
10:12:11 20 very centralized. And it will, over the next three
10:12:13 21 to five years, grow into the hospital setting and be
10:12:17 22 much more decentralized testing.

10:12:19 23 Q. For the clinical market, do those
10:12:36 24 sequencing systems require regulatory approval?

10:12:40 25 A. Every country has their own regulatory

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10:12:47 1 environment that -- that we work with. Here in the
10:12:49 2 United States, lab developed tests are the most
10:12:54 3 common approached for early clinical tests.

10:12:57 4 And so as long as that lab has its proper
10:13:01 5 certifications, you know, clear kept proper
10:13:11 6 certifications, they can validate and create their
10:13:11 7 own lab-developed tests using our technologies.

10:13:14 8 In other parts of the world, we absolutely
10:13:16 9 have to go and get regulatory cleared systems, you
10:13:18 10 know, whether that's a CE-IVD or in China an NNPA
10:13:21 11 regulation of those. So we work with each of those
10:13:24 12 countries to get the proper regulatory approvals for
10:13:31 13 -- for our products.

10:13:32 14 Q. So for a new product in the United States,
10:13:37 15 in terms of going from having a sort of sequencer
10:13:42 16 that's, you know, ready to be sold, but then taking
10:13:45 17 it from, you know, just being able to be sold for
10:13:48 18 research use, then being able to market it for a
10:13:52 19 clinical application, could you describe what the
10:13:55 20 process is to get to that point where you could
10:13:58 21 market it for clinical application?

10:13:59 22 A. Yeah, right now we -- we have the MiSeqDX
10:14:09 23 that, you know, we've taken through the US FDA. And
10:14:12 24 we put that through years ago with a full work flow
10:14:16 25 in the round of cystic fibrosis panels. And this

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10:14:20 1 was three to five years after the RUO version of
10:14:25 2 MiSeq was launched.
10:14:27 3 We've similarly been taking through the
10:14:30 4 NextSeq as a NextSeq DX. And, again, it's typically
10:14:33 5 a three- to five-year lag behind -- in an RUO
10:14:36 6 product because of all of the documentation and
10:14:39 7 design controls and work flows; but also because
10:14:43 8 once it's submitted and you've got that cleared
10:14:47 9 device, the change control around that becomes much
10:14:50 10 more onerous. And so you want to make sure that the
10:14:53 11 system is hardened and the chemistries are hardened
10:14:56 12 and that work flow isn't going to undergo ongoing
10:15:00 13 changes that a research environment will have --
10:15:02 14 accept.

10:15:02 15 And so it typically takes us three to five
10:15:06 16 years before submitting for a -- a regulatory
10:15:09 17 cleared device after going out to market in a
10:15:17 18 research setting.

10:15:20 19 THE COURT REPORTER: In the what setting?

10:15:22 20 I'm sorry?

10:15:22 21 THE WITNESS: Research setting. Research.

10:15:24 22 BY MS. SCOTT:

10:15:24 23 Q. And for the MiSeqDX, was it initially
10:15:32 24 approved in countries outside the US for clinical
10:15:38 25 use?

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10:15:38 1 A. My understanding is the MiSeq we first did
10:15:43 2 in the US as the MiSeqDX with the cystic fibrosis
10:15:48 3 panel. The NextSeq DX, however, we first went for a
10:15:50 4 CE-IVD mark with NIPT work flow for the NextSeq DX.
10:16:00 5 And so it was CE-IVD cleared --

10:16:00 6 THE COURT REPORTER: Can you slow down
10:16:00 7 with the letters, please. Thank you.

10:16:02 8 THE WITNESS: So the NextSeq DX was CE-IVD
10:16:08 9 cleared before we took that back into the U.S. FDA
10:16:12 10 submission.

10:16:14 11 BY MS. SCOTT:

10:16:14 12 Q. And how long was it between the original
10:16:22 13 NextSeq launch and getting the CE-IVD clearance?

10:16:29 14 A. Three to five years is my guess.

10:16:45 15 Q. If the defendants were to launch their
10:16:48 16 sequencing products in the United States and wanted
10:16:53 17 to seek clinical approval, is there any reason that
10:16:59 18 you think it would be faster for them than the three
10:17:04 19 to five years that Illumina's experienced?

10:17:09 20 A. They wouldn't need U.S. FDA approval to
10:17:14 21 bring it into the U.S. for clinical use because of
10:17:17 22 the LDT environment within the United States. So
10:17:20 23 they would be able to immediately let labs validate
10:17:24 24 their own work flows on a research system in the
10:17:27 25 United States. So they would have an opportunity

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10:17:31 1 right away to go into these clinical market
10:17:31 2 opportunities.
10:17:34 3 They would be faster than the three to
10:17:38 4 five years because they already have clearance in
10:17:40 5 China and they already have CE-IVD clearance in some
10:17:47 6 parts of -- of Europe. And so the documentation and
10:17:49 7 the portfolio that would be required for U.S. FDA
10:17:52 8 submission was more advanced than starting from zero
10:17:56 9 in the U.S.

10:18:03 10 MS. SCOTT: I think I lost the realtime.

10:18:13 11 MR. McCLELLAN: Mine's still working.

10:18:18 12 THE COURT REPORTER: Counsel, would you
10:18:22 13 like to go off the record?

10:18:23 14 MS. SCOTT: Yes, let's go off the record.

10:18:26 15 THE VIDEOGRAPHER: We are going off the
10:18:27 16 record at 10:18 a.m. Pacific Standard Time.

10:19:49 17 (Short recess taken.)

10:20:09 18 THE VIDEOGRAPHER: We are back on the
10:20:15 19 record at 10:20 a.m. Pacific Standard Time.

10:20:21 20 BY MS. SCOTT:

10:20:23 21 Q. So in thinking about the clinical market
10:20:26 22 in the United States, what is your understanding for
10:20:32 23 how long it would take for the Defendants to be able
10:20:39 24 to get approval to be able to offer diagnostic tests
10:20:46 25 in the U.S.?

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10:36:40 1 U. S. ?

10:36:40 2 A. It's really too hard for us to do because
10:36:45 3 there are so many different aspects to this that are
10:36:49 4 unpredictable for us right now. So, you know, it's
10:36:53 5 not just the lost sales at lower prices or the lost
10:36:58 6 sales because of lower prices at those accounts,
10:37:01 7 it's a market expectation that it changes.

10:37:03 8 We're so early in the market that with
10:37:06 9 these growth rates and -- and the way the business
10:37:09 10 is -- is, you know, growing in the U.S., it's hard
10:37:13 11 to understand what that market is -- dynamic is
10:37:16 12 going to look with -- with them having come in
10:37:18 13 and -- and undercut both pricing. You know, the
10:37:20 14 customers' relationships that I talked about earlier
10:37:24 15 are so critical with Illumina. You know, the damage
10:37:26 16 to customer relationships makes it hard for -- for
10:37:31 17 us to predict it.

10:37:31 18 So -- so no, we -- we have not been able
10:37:33 19 to quantify what that overall damage would be
10:37:37 20 because of this -- this price -- price cutting.

10:37:41 21 Q. Has Illumina done anything to try to
10:37:44 22 quantify it?

10:37:48 23 A. Not that I've seen.

10:37:48 24 Q. Does Illumina have any current plans to
10:37:54 25 reduce its prices if Defendants were to launch their

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10:38:00 1 products?

10:38:00 2 A. We don't have a current plan for it.

10:38:03 3 We're always lowering prices. That's -- that's how
10:38:07 4 we've been successful in driving the market. That's
10:38:09 5 why we've launched various platforms. That's why
10:38:13 6 we're continuing to innovate our technology. But
10:38:18 7 it's, you know, the timing with the market at
10:38:20 8 appropriate points in time when the market can
10:38:23 9 absorb that, not -- not a destructive approach to
10:38:28 10 other technologies or to our own technologies
10:38:32 11 prematurely.

10:38:32 12 Q. And when you say you're always lowering
10:38:36 13 prices, is that because in a sense, you're making
10:38:41 14 the products -- you're changing the products and
10:38:43 15 making them more efficient or is it a matter of for
10:38:47 16 the same product, you're just lowering the price or
10:38:50 17 providing a further discount?

10:38:51 18 A. It can be both. For the most part, it's
10:38:56 19 by launching new innovations. A great example is
10:39:00 20 our NextSeq 2000 that we just launched. It's to
10:39:06 21 replace our NextSeq 550 in that mid part of our
10:39:06 22 portfolio and its operating cost is -- is about half
10:39:10 23 of the operating cost of the next five --
10:39:15 24 NextSeq 550. Because we've improved our
10:39:16 25 chemistries, we've miniaturized everything within it

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10:39:19 1 and we've been able to reduce our cost.

10:39:22 2 So most of these cost reductions are to
10:39:25 3 the big parts of the market segment, where we've
10:39:28 4 been able to innovate to make it worth it. That
10:39:30 5 being said, we can always make modifications to
10:39:34 6 pricing on existing on-market prices as well. We
10:39:36 7 just tend not to do that as regularly as we try to
10:39:40 8 introduce new innovations into the market.

10:39:47 9 Q. And isn't it also the case that in some
10:39:49 10 cases, Illumina does things with the intention of
10:39:56 11 increasing the average sales price of a product?

10:40:01 12 MR. McCLELLAN: Objection. Vague.

10:40:02 13 THE WITNESS: We have -- we have an annual
10:40:09 14 price change. We used to do that on April 1st. We
10:40:14 15 now do that in the middle of February. And we
10:40:19 16 typically have, on average, around a 3 percent price
10:40:22 17 increase, which is consistent with the way we see
10:40:26 18 inflation. So we do have annual price changes.
10:40:30 19 They tend to -- to gradually go up.

10:40:32 20 BY MS. SCOTT:

10:40:33 21 Q. So for a given product, the annual price
10:40:36 22 would be increasing. But there are times when you
10:40:42 23 introduce a new product, that whether it's -- it has
10:40:45 24 lower cost or -- or whatnot, and that results in the
10:40:49 25 ability to offer a lower price; is that right?

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10:40:53 1 A. For the most part, yes. There are certain
10:40:57 2 product lines that we don't do annual price
10:40:59 3 increases on. And those have included those that
10:41:03 4 are most likely to be used for whole genome
10:41:08 5 sequencing because that is the most price sensitive
10:41:11 6 application we have. And so for our HiSeq X Ten, we
10:41:11 7 never did annual price increases.

10:41:17 8 For our NovaSeq S4 flow cells, we either
10:41:19 9 don't do or we do very tiny annual price increases,
10:41:23 10 compared to our other product lines. So it gives us
10:41:26 11 the opportunity to strategically prices things based
10:41:31 12 on the application and — and the market acceptance
10:41:33 13 of a price change.

10:41:41 14 Q. Does Illumina ever offer short-term
10:41:45 15 promotions on its products?

10:41:47 16 A. We have on occasion, yes.

10:41:52 17 Q. Can you give me a couple of examples of
10:42:01 18 some short-term promotions that have been offered?

10:42:05 19 A. We're offering a 50 percent discount on
10:42:07 20 some library prep kits right now for anybody that
10:42:11 21 needs to use those for COVID-19 testing to help.
10:42:17 22 But that will stop at the end of this year, unless
10:42:23 23 COVID-19 continues. We have, on occasion, offered
10:42:26 24 entry-level promotions on software and storage and
10:42:29 25 computer. Promotional practices are — are very

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10:42:37 1 common in commercial organizations. But they're
10:42:40 2 promotions because they're for a limited time period
10:42:42 3 and not a complete reset of a price point.

10:42:44 4 Q. Hopefully my microphone isn't picking up
10:43:19 5 the flock of turkeys that is going down the side of
10:43:22 6 the hill by my house. They're quite annoying. I
10:43:26 7 will say that. So hopefully you-all can't hear
10:43:30 8 them. So let's see. Let's move on.

10:43:50 9 Would you agree that the expansion of
10:43:57 10 affordable whole genome sequencing is required for
10:44:08 11 the rapid expansion of precision medicine?

10:44:13 12 MR. McCLELLAN: Objection. Vague.

10:44:15 13 THE WITNESS: I don't believe that just
10:44:23 14 the cost of the whole genome sequencing today is
10:44:30 15 limiting the adoption of whole genome sequencing or
10:44:34 16 precision medicine. Illumina's price point today is
10:44:38 17 more than enabling for these applications. There's
10:44:43 18 no need to lower it further to drive rapid
10:44:47 19 expansion. We need -- we need clinicians and
10:44:54 20 oncologists and OB/Gyns and payers and
10:44:58 21 reimbursement. The market does not need genomes
10:45:02 22 today to drive proper precision medicine.

10:45:19 23 BY MS. SCOTT:

10:45:19 24 Q. Would you agree that price of whole genome
10:45:23 25 sequencing is one limiting factor?

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11:49:11 1 If Illumina had a change to its reputation
11:49:29 2 but it had no change in sales, how would that harm
11:49:37 3 it?

11:49:44 4 MR. McCLELLAN: Objection. Incomplete
11:49:45 5 hypothetical.

11:49:52 6 BY MS. SCOTT:

11:49:52 7 Q. So --

11:49:52 8 A. Yeah, I have a hard time believing that
11:49:55 9 your reputation is -- is changed without it
11:50:01 10 impacting sales as customer -- customer experience,
11:50:06 11 the customer relationships are critical to ongoing
11:50:10 12 business. And so I have a hard time disassociating
11:50:17 13 those to answer your question.

11:50:19 14 Q. So as a -- would you agree that Illumina's
11:50:41 15 customers of high-throughput sequencing systems are
11:50:49 16 typically sophisticated institutions?

11:50:52 17 A. Yes.

11:50:55 18 Q. And in order to acquire Illumina's
11:51:00 19 high-throughput sequencing systems, they require a
11:51:04 20 substantial investment; correct?

11:51:07 21 A. Correct. Our NovaSeq 6000 platform is a
11:51:13 22 list price of a little over 900,000 U.S. dollars.

11:51:26 23 Q. Would you agree that the primary concern
11:51:29 24 of a high-throughput sequencing customer is whether
11:51:33 25 or not the -- the sequencer is able to meet their

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01:09:00 1 applications become easier for less sophisticated

01:09:04 2 labs to run.

01:09:10 3 Q. And some customers who currently cannot

01:09:15 4 afford to purchase DNA sequencing systems for

01:09:20 5 in-house use will send their samples out for

01:09:26 6 sequencing as a service; correct?

01:09:29 7 A. Correct. That is an alternative for

01:09:32 8 people without the capital budgets or without the

01:09:35 9 volumes.

01:09:36 10 Q. Would you agree that in markets outside of

01:09:57 11 the United States, where there are multiple --

01:10:08 12 multiple providers of sequencing technology at the

01:10:13 13 high-throughput level, that Illumina competes on

01:10:17 14 both product features and price?

01:10:19 15 A. Yes. Our best example of that would be

01:10:28 16 within the China market, where we push much harder

01:10:32 17 on the product features than the price because,

01:10:34 18 again, our -- our pricing practices don't allow us

01:10:37 19 to go as deep into the price points as necessary.

01:10:41 20 And so it's products and/or the way we deploy

01:10:44 21 through partnerships in China that is unique to how

01:10:48 22 we have to do business in the rest of the world.

01:11:01 23 Q. So how is -- how is it different -- how is

01:11:06 24 it different in China versus the rest of the world?

01:11:09 25 A. How was what different?

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03:37:05 1 A. Low magnitude of what?

03:37:12 2 Q. Well, so for example, if Defendants were
03:37:15 3 to sell one sequencer and, you know, reagent kits
03:37:24 4 for that sequencer this year in -- in the United
03:37:27 5 States and nothing else, would you consider that to
03:37:30 6 be a substantial harm to Illumina?

03:37:35 7 MR. McCLELLAN: Objection. Incomplete
03:37:37 8 hypothetical.

03:37:41 9 THE WITNESS: I do. I think any sequencer
03:37:42 10 in the United States becomes a major threat and a
03:37:46 11 major challenge for me. You know, especially at
03:37:51 12 price points that are, you know, 50 percent of what
03:37:54 13 Illumina charges, it resets the expectations of the
03:37:57 14 entire market, it makes others feel like this
03:38:02 15 technology can come into the U.S., when right now,
03:38:04 16 most of them will say, you know, Illumina --
03:38:06 17 Illumina's IP is -- is of strength in the United
03:38:10 18 States, and it will cause a complete shift in -- in
03:38:13 19 my market and customer perception of what's
03:38:16 20 happening in -- in sequencing.

03:38:18 21 BY MS. SCOTT:

03:38:20 22 Q. So -- so what I want to understand,
03:38:22 23 though, because I -- I think the way you're --
03:38:25 24 you're looking at this is, if there's one, then
03:38:29 25 there's more, and then there will be more harm.

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03:38:34 1 So what I want to understand is, if
03:38:36 2 there's one customer or one sequencer or five
03:38:41 3 sequencers or ten sequencers or a hundred
03:38:46 4 sequencers, I would -- I would think that those
03:38:49 5 would be different -- a different magnitude of harm
03:38:53 6 to Illumina.
03:38:56 7 Would you agree with that?
03:38:58 8 MR. McCLELLAN: Objection. Form and asked
03:39:01 9 and answered.
03:39:01 10 THE WITNESS: Yeah, I do. And I -- I do
03:39:05 11 believe that it's -- it's -- it's just as harmful
03:39:08 12 and will create a future challenges. And we've seen
03:39:11 13 this specifically happen, I believe it was in
03:39:14 14 Sweden. You know, BGI put a system into a lab in
03:39:19 15 Sweden and was cited as it's just one sequencer.
03:39:22 16 That same lab now has four or five different MGI
03:39:27 17 systems and they're building an institutional
03:39:30 18 capability around it.
03:39:32 19 Now, we're seeing the same thing start to
03:39:33 20 play out now in Germany, where it's coming in
03:39:34 21 through different BGI Group entities. So yes, one
03:39:38 22 sequencer completely changes a market dynamic and
03:39:41 23 other country's expectations of what they'll have
03:39:44 24 access to and how those scientists will try to use
03:39:47 25 them.

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03:39:55 1 BY MS. SCOTT:

03:39:55 2 Q. Let me ask you a different question.

03:39:57 3 If MGI were to only sell sequencers to

03:40:06 4 customers who are currently using sequencing as a

03:40:15 5 service, would you see that as a substantial harm to

03:40:20 6 Illumina?

03:40:22 7 MR. McCLELLAN: Objection. Incomplete

03:40:23 8 hypothetical.

03:40:24 9 THE WITNESS: Any use of SBS technologies

03:40:35 10 and using our investments and R&D into this to

03:40:40 11 undercut our prices, to me, is going to create

03:40:44 12 substantial harm, whether it's through services or

03:40:47 13 through products.

03:41:10 14 BY MS. SCOTT:

03:41:10 15 Q. Is there any degree of revenue that

03:41:17 16 Defendants could earn from sequencing products in

03:41:20 17 the United States that you would feel is

03:41:29 18 insufficient to be considered substantial harm to

03:41:35 19 Illumina?

03:41:36 20 A. No.

03:41:37 21 Q. And is it — in your view, is a KOL at a

03:42:16 22 university doing a free trial of a Defendants'

03:42:23 23 sequencer, that in and of itself would cause

03:42:28 24 substantial harm to Illumina?

03:42:31 25 A. Absolutely. You know, KOLs by definition

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03:47:58 1 pipeline. A normal instrument sales cycle for me is
03:48:03 2 between nine and twelve months. And so the majority
03:48:07 3 of what will be impacted is always nine to twelve
03:48:09 4 months out, as people secure the funding and the
03:48:14 5 projects for it.

03:48:15 6 And so the lookback is only going to
03:48:17 7 capture a subset of the true dynamic that we're
03:48:17 8 facing and the -- the expectation in the market that
03:48:25 9 we're going to be facing on price pressures that are
03:48:27 10 even outside of those specific transactions. So --
03:48:29 11 so what you're asking me to do is look at a very
03:48:34 12 narrow scope of lost revenues that will fail to
03:48:38 13 capture the overall market dynamic shift,
03:48:41 14 reputational shift, and -- and future market loss
03:48:44 15 through opportunities.

03:48:45 16 Q. And if you -- but if you wanted to look
03:48:46 17 at, say, for example, alleged price erosion, you
03:48:52 18 would, at least as a starting point, be able to look
03:48:56 19 at the average sales price that was projected before
03:49:01 20 the Defendants's announcement, versus what the
03:49:07 21 average sales price was either at the end of the
03:49:10 22 year or some -- at some point in the future, you
03:49:13 23 know, if you need more time to get through that
03:49:17 24 sales cycle?

03:49:19 25 A. It completely changes the dynamic. I'm

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03:49:22 1 not -- I'm not going to be able to quantify it for
03:49:24 2 you and you're not going to get me to -- to -- to
03:49:24 3 try to quantify it for you here. You know, this --
03:49:31 4 this is a very dynamic, fast moving market. It's
03:49:36 5 based on customer relationships and -- and customer
03:49:40 6 loyalty. And -- and I cannot predict how that's
03:49:43 7 going to be played out over the course of this year
03:49:46 8 or the next ten years, if -- if this was to be
03:49:48 9 allowed.

03:49:51 10 Q. You would agree, though, that if someone
03:49:52 11 were to want to do that analysis or to try to do
03:49:57 12 that analysis, that you would have the data to be
03:50:04 13 able to -- to perform that analysis; right?

03:50:10 14 MR. McCLELLAN: Objection.
03:50:11 15 Mischaracterizes prior testimony.

03:50:12 16 THE WITNESS: I don't believe we would
03:50:16 17 have the data. I think we would have transactional
03:50:20 18 data to look at ASP changes or specific lost sales.

03:50:25 19 But to attribute those to -- to one
03:50:29 20 competitor or to one market shift is a very, very
03:50:35 21 difficult thing to do. And so I don't think that
03:50:37 22 you'll ever be able to get an accurate
03:50:41 23 representation of that or -- or the impact it's
03:50:43 24 going to have on the future.

03:50:44 25 BY MS. SCOTT:

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03:50:48 1 Q. Okay.

03:51:06 2 MS. SCOTT: Can we just check how long
03:51:07 3 we've been on the record?

03:51:12 4 THE COURT REPORTER: Dave?

03:51:12 5 THE VIDEOGRAPHER: Yes, stand by.

03:51:23 6 Five hours and 31 minutes.

03:51:27 7 MS. SCOTT: Thank you.

03:51:35 8 BY MS. SCOTT:

03:51:35 9 Q. Okay. Let's -- let's talk a little bit
03:51:37 10 more about the contracting process for consumables,
03:51:45 11 in particular.

03:51:46 12 Does -- are there -- I don't know. Is
03:51:54 13 there a term to those consumable agreements?

03:51:57 14 A. There are different types of agreements
03:52:01 15 that we enter into with customers. Most commonly,
03:52:07 16 we just have an annual price agreement. And so they
03:52:14 17 can order off that as they need to, just knowing
03:52:18 18 what their price is going to be for that -- for that
03:52:23 19 year. And, again, in -- and right now, that runs
03:52:26 20 from middle of February to the middle of February
03:52:29 21 the following year.

03:52:30 22 We also, outside of just sort of a
03:52:30 23 customer price like that, and we have standing
03:52:32 24 agreements and those are typically one year, but can
03:52:35 25 be as long as three-year standing agreements. And

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03:52:38 1 for those, they're usually the larger customers
03:52:42 2 where they will give us a large purchase order with
03:52:45 3 a ship schedule and those products will ship either
03:52:49 4 weekly or monthly or bimonthly, whatever -- whatever
03:52:54 5 that customer needs in over the courser of that
03:52:57 6 agreement timeframe.

03:52:57 7 And then we also, mostly for clinical
03:53:00 8 labs, enter into much more detailed supply agreement
03:53:04 9 contracts. And those supply agreements will -- will
03:53:08 10 take into different considerations and -- and be a
03:53:11 11 more detailed set of -- set of supply and audit
03:53:16 12 rights for those customers so, you know, we have
03:53:19 13 fewer of those, but those are usually a three-year
03:53:22 14 agreement because they're a little bit more
03:53:24 15 complicated. And so we tend to enter into those
03:53:27 16 supply agreements with -- with larger clinical labs
03:53:31 17 to ensure continuity of supply. And that's really
03:53:38 18 their request to ensure continuity of supply.

03:53:40 19 Q. And do you have a sense for what
03:53:42 20 percentage of the consumable revenue falls under
03:53:47 21 those three buckets of different types of
03:53:50 22 agreements?

03:53:51 23 A. I don't.

03:53:56 24 Q. And do -- do the -- the customers that are
03:54:00 25 generally the high-throughput NovaSeq customers, are

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03:54:03 1 those mostly going to be in the standing agreement
03:54:07 2 category?

03:54:08 3 A. Yeah. Those are usually annual standing
03:54:11 4 agreements. And that's where we will use our
03:54:14 5 pricing to determine the magnitude of what they're
03:54:19 6 willing to commit to for that 12 months, as
03:54:22 7 evidenced also then by ship schedules over that
03:54:26 8 12 months to secure the different discounts.

03:54:29 9 Somebody just got attacked by some dogs.

03:54:33 10 MS. SCOTT: I understand. I've been
03:54:35 11 trying to keep mine out of this room. He only got
03:54:39 12 in once.

03:54:41 13 BY MS. SCOTT:

03:54:42 14 Q. Okay. So -- okay.

03:54:43 15 So for the standing agreements, did you
03:54:46 16 say those were February to February cycle?

03:54:51 17 A. Yeah. We've gone to mid -- February 14th
03:54:55 18 or 15th, a mid-February annual cycle on those
03:55:03 19 standing agreements.

03:55:04 20 Q. Okay. And the -- so the price that's
03:55:05 21 associated with the standing agreement, is that
03:55:07 22 based on a particular volume commitment?

03:55:10 23 A. Correct. So --

03:55:10 24 Q. Well --

03:55:16 25 A. So we usually -- so just to be clear, we

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03:55:18 1 use the prior year as a starting point -- as a
03:55:22 2 discussion with those customers, to talk about their
03:55:25 3 volumes increasing or decreasing so that we can
03:55:29 4 establish the next year. But if it's wildly
03:55:32 5 different than the prior year, then we're unlikely
03:55:34 6 to enter into a full 12-month commitment because
03:55:37 7 customers will often try to overcommit to volume to
03:55:41 8 get bigger discounts, as you might imagine.

03:55:43 9 So it -- it generally is a -- is an
03:55:45 10 increase over prior year as the market increases,
03:55:48 11 but -- but, you know, not -- not a dramatic change,
03:55:52 12 unless something -- something's happening with that
03:55:53 13 customer that we're aware of.

03:56:02 14 Q. About -- do you have a sense for how many
03:56:48 15 customers fall into this bucket of having standing
03:56:54 16 agreements?

03:56:59 17 A. Probably in the [REDACTED] to [REDACTED] customer range.
03:57:03 18 There's -- it's -- it's a very busy time of sliding
03:57:07 19 off on things, between the new year and the middle
03:57:09 20 of February for me.

03:57:10 21 Q. Okay. Are -- are you aware of a situation
03:57:57 22 involving the University of Toronto trying to
03:58:03 23 purchase a sequencer from MGI?

03:58:07 24 A. I don't know all the specifics, but I know
03:58:13 25 that, you know, University of Toronto was one of the

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04:33:55 1 A. Okay.

04:34:30 2 Q. Okay. And this slide that ends in '304 is
04:34:37 3 titled "Differentiators." And on the left there is
04:34:40 4 a series of different categories, and then there's a
04:34:45 5 column for Illumina and a column for BGI and then a
04:34:48 6 recommendation.

04:34:49 7 Do you see that?

04:34:49 8 A. Yes.

04:34:52 9 Q. And if you look at the first line, it's
04:35:14 10 output/throughput, and both Illumina and BGI have
04:35:18 11 three stars and the recommendation is no
04:35:22 12 differentiation.

04:35:24 13 Do you have an understanding of what that
04:35:27 14 means?

04:35:27 15 A. That the output and throughput are very
04:35:31 16 similar in the technologies as we see them today.

04:35:34 17 Q. If you go down to T-A-T, what does "TAT"
04:35:46 18 stand for?

04:35:47 19 A. Turnaround time. That speaks to the
04:35:51 20 length of time from putting a sample on a sequencer
04:35:54 21 to getting data off a sequencer.

04:35:57 22 And turnaround time is important to think
04:36:01 23 of as not just one versus two days or the sequencing
04:36:05 24 time that you mentioned. But as we discussed
04:36:09 25 earlier, we've done a lot to embed real-time

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04:39:08 1 to do into development.

04:39:10 2 This doesn't translate into an external

04:39:13 3 document, which is why I haven't seen it or we

04:39:16 4 wouldn't put this in front of our team.

04:39:18 5 But I would say that the T7 announcement

04:39:21 6 was not that long ago, and the first customer

04:39:25 7 shipments were just recent. So it's really hard for

04:39:30 8 us to give three stars on reliability or operations

04:39:33 9 maturity when it's a brand-new platform that's being

04:39:37 10 launched, and we haven't seen enough of them in the

04:39:39 11 wild to know what they will perform like.

04:39:42 12 Q. And would you agree that the Defendants'

04:39:53 13 lack of sales history in the U.S. will be, at least

04:40:00 14 by some degree of an impediment to them, being

04:40:04 15 successful in the U.S. market [verbatim]?

04:40:09 16 A. I don't understand where you're going. I

04:40:16 17 don't believe they should be selling in the United

04:40:19 18 States, period, so I -- so of course still have an

04:40:23 19 impediment to success in the United States if

04:40:27 20 they're not selling in the United States.

04:40:29 21 Q. Fair enough. Okay. So if they were

04:40:34 22 selling in the United States and -- or -- well,

04:40:38 23 actually I'll rephrase the question.

04:40:40 24 If the Defendants were to begin selling in

04:40:43 25 the United States, do you think that them not having

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04:40:50 1 a -- essentially a -- a track record within the U.S.
04:40:54 2 would be an impediment to them gaining traction in
04:40:58 3 the market?

04:40:59 4 A. No. They have more than --

04:40:59 5 THE COURT REPORTER: I'm sorry. Mark,
04:40:59 6 "Answer: No. They have more than," and I didn't
04:40:59 7 hear you because it -- there was cutoff.

04:41:15 8 THE WITNESS: They have more than 460
04:41:18 9 global customers and more than 1600 systems. They
04:41:23 10 have proven their technology and don't need to
04:41:26 11 continue to try to prove that technology to enter
04:41:29 12 any market.

04:41:35 13 BY MS. SCOTT:

04:41:35 14 Q. Isn't it true that that is one of the
04:41:39 15 arguments that is made to customers to try to
04:41:44 16 convince them not to buy from the Defendants or
04:41:48 17 their affiliates?

04:41:49 18 A. What specifically is the argument?

04:41:52 19 Q. That they -- well, let me just go back to
04:41:57 20 the slide to get the right language.

04:42:11 21 So specifically reliability and operations
04:42:16 22 maturity. So isn't the -- isn't it true that
04:42:24 23 Illumina uses the sort of untested nature or -- or
04:42:34 24 it would say it's questionable reliability of the
04:42:36 25 Defendants' products as an argument to customers to

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04:54:03 1 So the team that was working on that
04:54:06 2 acquisition plan and running all of the work streams
04:54:10 3 around the integration planning was directly
04:54:13 4 reporting to me for -- from January till November of
04:54:17 5 2019.

04:54:20 6 Q. And what's your understanding of why the
04:54:24 7 PacBio acquisition didn't go through?

04:54:27 8 MR. McCLELLAN: Objection. Calls for a
04:54:28 9 legal conclusion.

04:54:30 10 THE WITNESS: Yeah, we obviously had
04:54:35 11 the -- the filings from both the CMA in the UK and
04:54:39 12 the FTC here in the U.S., with some of their
04:54:43 13 challenges with that. And so, you know, in -- in
04:54:46 14 face of their positions on that, we stopped the
04:54:49 15 acquisition attempt.

04:54:52 16 BY MS. SCOTT:

04:54:54 17 Q. Have you read the complaint by the FTC
04:55:00 18 challenging the acquisition?

04:55:02 19 A. I've seen some of the highlights. I
04:55:06 20 didn't -- didn't read the entire complaint.

04:55:09 21 Q. Are you aware that the FTC referred to
04:55:13 22 Illumina as a monopolist?

04:55:15 23 A. I am.

04:55:16 24 MR. McCLELLAN: Object -- objection.
04:55:19 25 Form.

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05:06:07 1 advisement, and we'll respond to you on it.

05:06:13 2 And -- give me one second. I don't think

05:06:17 3 we're going to have any questions, but let's just

05:06:20 4 take a one-minute break. Just -- just hang up and

05:06:24 5 stand by for one second.

05:06:26 6 MS. SCOTT: Okay.

05:06:30 7 THE COURT REPORTER: Dave, off the record,

05:06:32 8 please.

05:06:33 9 THE VIDEOGRAPHER: We are going off the

05:06:35 10 record at 5:06 p.m. Pacific Standard Time.

05:06:40 11 (Short recess taken.)

05:07:35 12 THE VIDEOGRAPHER: We are back on the

05:07:38 13 record at 5:07 p.m. Pacific Standard Time.

05:07:42 14 MR. McCLELLAN: No questions from me at

05:07:44 15 this time, so the deposition is concluded. Thank

05:07:48 16 you, everyone.

05:07:51 17 We can go off the record.

05:07:52 18 THE VIDEOGRAPHER: Okay. One second.

05:07:54 19 This concludes today's proceedings in the

05:07:57 20 deposition of Mark Van Oene. Total number of media

05:08:01 21 units was ten.

05:08:04 22 We are off the record at 5:08, Pacific

05:08:10 23 Standard Time.

05:08:12 24 (Proceedings concluded, 5:08 p.m.)

25 *****

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JURAT

I, MARK VAN OENE, do hereby certify under
penalty of perjury that I have read the foregoing
transcript of my deposition taken on Thursday,
04/09/2020; that I have made such corrections as
appear noted herein in ink, initialed by me; that my
testimony as contained herein, as corrected, is true
and correct.

Dated this ____ day of _____,
2020, at _____,
California.

MARK VAN OENE

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1 CERTIFICATE OF REPORTER

2 I, Hanna Kim, a Certified Shorthand
3 Reporter, do hereby certify:

4 That prior to being examined, the witness
5 in the foregoing proceedings was by me duly sworn to
6 testify to the truth, the whole truth, and nothing
7 but the truth;

8 That said proceedings were taken before me
9 at the time and place therein set forth and were
10 taken down by me in shorthand and thereafter
11 transcribed into typewriting under my direction and
12 supervision;

13 I further certify that I am neither
14 counsel for, nor related to, any party to said
15 proceedings, not in anywise interested in the
16 outcome thereof.

17 Further, that if the foregoing pertains to
18 the original transcript of a deposition in a federal
19 case, before completion of the proceedings, review
20 of the transcript [] was [] was not requested.

21 In witness whereof, I have hereunto
22 subscribed my name.

23 Dated: 10th day of April, 2020

24 
25 Hanna Kim

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1 ERRATA SHEET FOR THE TRANSCRIPT OF:

2 Case Name: ILLUMINA, ET AL. vs. BGI, MGI, ET AL.

3 Dep. Date: 04/09/2020

4 Deponent: MARK VAN OENE

5 CORRECTIONS:

6	Pg.	Ln.	Now Reads	Should Read	Reason
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1	Pg.	Ln.	Now Reads	Should Read	Reason
2	—	—	—	—	—
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1	Pg.	Ln.	Now Reads	Should Read	Reason
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MARK VAN OENE

SUBSCRIBED AND SWORN BEFORE ME

THIS ___ DAY OF ___, 2020.

(Notary Public) MY COMMISSION

EXPIRES: _____